



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,953	07/11/2005	Giacomo Crotti	19339-099974	3768
7590 Robin W Asher Clark Hill 500 Woodward Avenue Suite 3500 Detroit, MI 48226-3435			EXAMINER MERLINO, ALYSON MARIE	
			ART UNIT 3676	PAPER NUMBER
			MAIL DATE 12/27/2006	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	10/517,953	CROTTI ET AL.	
	Examiner	Art Unit	
	Alyson M. Merlino	3676	

All Participants:
Status of Application: Pending

 (1) Alyson M. Merlino.

(3) _____.

 (2) Robin W. Asher.

(4) _____.

Date of Interview: 18 December 2006
Time: 1:00 p.m.
Type of Interview:

- ☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

 Exhibit Shown or Demonstrated: ☐ Yes ☒ No

If Yes, provide a brief description:

Part I.

Rejection(s) discussed:

NONE

Claims discussed:

1-14

Prior art documents discussed:

NONE

Part II.
SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

In the telephone interview with Mr. Asher, he noted that the claims to be considered for examination is the set containing 14 claims. This set of claims, the set to be examined, is attached to this interview summary.

Part III.

- ☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.
☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

BRIAN E. GLESSNER
 SUPERVISORY PATENT EXAMINER


 (Examiner/SPE Signature)

(Applicant/Applicant's Representative Signature – if appropriate)

ART 30. A.M.D.T

- 41 -

EPO - DG 1

20.09.2004

CLAIMS

(96)

1. A lock (1, 1') for a door of a motor vehicle comprising:

5 a closing mechanism (3) designed for coupling, in a releasable way, with a lock striker (2) for bringing about closing of said door;

a mechanical actuating assembly (4) of said closing mechanism (3), which comprises opening means (30, 38,
10 55, 57), for controlling release of said closing mechanism (3) from said lock striker (2), and means for inhibiting opening (41, 58), in turn including a first safety member (41) and a second safety member (58), that can be selectively activated for rendering said opening
15 means (30, 38, 55, 57) ineffective, respectively, from outside and from inside the motor vehicle; and

electric-actuator means (5) comprising a first output member (71) coupled with said first safety member (41);

20 said electric-actuator means (5) being housed in a fluid-tight way in a single casing (70) and said first output member (71) traversing, in a fluid-tight way, a through hole (73) of said casing (70) for co-operating with said first safety member (41);

25 characterized in that said electric-actuator means (5) comprise a second output member (72) coupled with

5 said second safety member (58), housed in a fluid-tight way in said casing (70) and traversing in a fluid-tight way a further through hole (74) of said casing (70); and in that said casing (70) defines an area (70a) for housing a manual control device (82, 156) of said first output member (71) and an additional electrical control device (155) of said second output member (72), which provides a function of child safety of said lock.

10 2. The lock as claimed in claim 1, characterized in that said casing (70) comprises at least two elements (77, 78), which can be coupled together with interposition of first sealing means (81).

15 3. The lock as claimed in claim 2, characterized in that said first sealing means (81) comprise a gasket (81) co-moulded on a perimetral portion (79) of one (77) of said elements (77, 78).

20 4. The lock as claimed in claim 2 or 3, characterized in that said holes (73, 74) are made entirely on one (77) of said elements (77, 78) and house respective seal rings (103) co-operating with said output members (71, 72).

25 5. The lock as claimed in any one of the foregoing claims, characterized in that each of said first and second safety member (41, 58) interacts with said opening means (30, 38, 55, 57) and is displaceable along a pre-set direction between a disabling configuration,

ART 34 AMDT

- 43 -

in which it renders said opening means (30, 38, 55, 57) ineffective and an enabling configuration, in which it enables actuation of said closing mechanism (3) by said opening means (30, 38, 55, 57), and in that each of said
5 first and second output member (71, 72) is provided with a rotational motion about an axis (E, F) of its own, which is transverse to the direction of displacement of the first and second safety member (41, 58) and is provided, in a position corresponding to an external end
10 (110, 111) of its own projecting from said casing (70), with a portion (75, 76) for interaction with the relative safety member (41, 58), said interaction portion (75, 76) being eccentric with respect to said axis (E, F).

15 6. The lock as claimed in claim 5, characterized in that said interaction portion (75, 76) is fixed to an end element (114, 115) coupled in an axially fixed position and in an axially mobile way on said external end (110, 111) of the relative output member (71, 72)
20 and is kept in a pre-set angular position on the external end (110, 111) by said elastic means (116, 117).

7. The lock as claimed in claim 5 or 6, characterized in that said interaction portion is a pin
25 (75, 76) engaged with a through hole (53, 67) of the relative said safety member (41, 58).

ART 34 AMDT

8. The lock as claimed in any one of the foregoing claims, characterized in that said opening means comprise a first actuating mechanism (31) and a second actuating mechanism (32), which can be connected, respectively, to an external handle and an internal handle of said door for controlling release of said closing mechanism (3) from said lock striker (2) respectively from outside and from inside the motor vehicle, said first and second safety member (41, 58) being respectively available in a corresponding said disabling configuration for rendering the respective said first actuating mechanism (31) and said second actuating mechanism (32) ineffective, providing, respectively, an external-safety function and an internal-safety function.

9. The lock as claimed in any one of the foregoing claims, characterized in that said first and second output members (71, 72) have parallel axes (E, F) and are actuated by respective electrical control devices (87, 88).

10. The lock as claimed in any one of the foregoing claims, characterized in that said housing area (70a) of said casing (70) is set on one opposite side of said second output member (72) with respect to said first output member (71), and in that said second output member (72) carries a first attachment element (167),

ART 34 AMDT

- 45 -

which can be connected to said additional electrical control device (155), and a second attachment element (133) which can be connected to said manual-control device (82, 156), said first attachment element (167) being angularly mobile with respect to said second output member (72) and said second attachment element (133) being angularly mobile with respect to said second output member (72) and angularly coupled with said first output member (71).

10 11. The lock as claimed in any one of the foregoing claims, characterized in that said casing (70) integrally defines an insulating body (149) of an electrical connector (148) for connection of said electric-actuator means (5) with an electrical wiring system of the motor vehicle.

12. The lock as claimed in claim 12, characterized in that said casing (70) houses a plurality of warning elements (143, 144, 145, 146, 173) for signalling the operating condition of components of said first lock (1, 1'), and an electrical circuit (147) for connection of said electric-actuator means (5) and said warning elements (143, 144, 145, 146, 173) with said electrical connector (148).

13. The lock as claimed in claim 12, characterized in that said warning elements comprise a plurality of microswitches (143, 144, 145, 146, 173), each of which

ART 3A AMEND

- 46 -

has an insulating portion (154) fixed to said casing (70) and electrical-connection means (150) for connection to said electrical circuit (147) projecting from said insulating portion (154) and embedded in a
5 resin.

14. The lock as claimed in claim 12 or 13, characterized in that said electrical circuit (147) comprises a plurality of conductive paths (152) carried by a flexible support made of insulating material (153)
10 fixed to said casing (70).